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EXAMINER

VERDIER, CHRISTOPHER M

ART UNIT

PAPER NUMBER

3745

24

DATE MAILED: 06/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/026,137

Applicant(s)

VIKEN, JAMES P.

Examiner

Christopher Verdier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 2-5 and 24-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25,28-30 and 34-41 is/are allowed.
- 6) ☒ Claim(s) 2-5,24,26 and 31-33 is/are rejected.
- 7) ☒ Claim(s) 27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 13.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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Applicant's Amendment dated May 5, 2003 has been carefully considered but is deemed non-persuasive. Claims 2-5 and 24-41 are pending. The claims have been amended in order to correct the informalities set forth in the first Office action. Correction of the above matter is noted with appreciation. Applicant has also voluntarily filed a Terminal Disclaimer relating to U.S. Patent 5,318,080.

Applicant's arguments with regard to amended claims 40-41 are persuasive. Claims 40-41 are allowable over the prior art of record. In addition, claims 25, 28-30, and 34-39 are allowable over the prior art of record. Claim 27 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant's argument that claims 3-5 have been amended to define over Japanese Patent 2-72,299 are persuasive. With regard to the rejection of claims 3-5 under 35 USC 102(e) as being anticipated by Chen 5,337,708, Applicant has argued that claims 3 and 4 have an earlier effective filing date than Chen 5,337,708, and Chen is not a prior art reference. Applicant has also argued that at least claims 2, 3, 4, 24, and 25 are supported by the disclosure of U.S. Patent Application 07/781,322 and are entitled to the effective filing date of October 23, 1991, based upon the filing date of U.S. Patent Application 07/781,322. These arguments are not persuasive, because the effective filing date for all pending claims of the instant application is March 9, 1994, based on U.S. Patent application 08/209,061, which matured into U.S. Patent 5,472,064. Claim 2 recites a first fluid line selectively intercoupled to the fluid exchange system and one of

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the pair of transmission cooling circuit ports and a second fluid line selectively intercoupled to the fluid exchange system, the source, and the other one of the pair of transmission cooling circuit ports, with the bypass fluid line selectively intercoupled between the pair of transmission cooling circuit ports. Claim 3 recites a bypass conduit that provides selective fluid communication between the first and second conduits, and selectively stopping the flow in the bypass conduit. Claim 4 recites similar features as set forth above with regard to claim 2, including a bypass conduit selectively communicating fluid between the pair of transmission cooling circuit ports, selectively coupling the bypass conduit between the pair of transmission cooling circuit ports, and selectively uncoupling the bypass conduit and coupling the first and second conduits. Claim 24 recites a bypass conduit for selectively communicating fluid between the pair of transmission cooling circuit ports, and selectively coupling the bypass conduit between the pair of transmission cooling circuit ports, and selectively uncoupling the bypass conduit. Claim 25 recites a bypass conduit for selectively communicating fluid between the first conduit to the second conduit, establishing a bypass condition by selectively coupling the bypass conduit between the first and second conduits, and establishing a fluid exchange condition by selectively uncoupling the bypass conduit between the first and second conduits. All of these features are found in U.S. Patent application 08/209,061, which matured into U.S. Patent 5,472,064. These features are not found in earlier U.S. Patent application 07/781,322 which matured into U.S. Patent 5,318,080, because earlier U.S. Patent application 07/781,322 which matured into U.S. Patent 5,318,080 does not contain a selectively coupled first and second line, a selectively coupled bypass line, and does not have a recirculation mode. Although figure 5 of U.S. Patent application 07/781,322 which matured into U.S. Patent 5,318,080 shows a T 55 that

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is coupled to the outlet port on the radiator 20 and the inlet port 16 on the transmission, T 55 is not selectively coupled to the first and second fluid lines 52 and 47, because these lines are disconnected from the fluid circuit and the T 55 is connected to determine the direction of flow in the fluid circuit, then the T 55 is disconnected and the first and second fluid lines 52 and 47 are reconnected to the fluid circuit.

Applicant's argument that amended claims 2 and 24 define over the combination of Japanese Patent 2-72,299 and Becnel '941 are persuasive. Applicant's argument that claims 2, 24, 26, 31-32, and 33 are not rejectable under 35 USC 103(a) based upon the combination of Chen '708 in view of Becnel '941 because Chen is not a proper prior art reference in view of the claim for priority to earlier patent application 07/781,322 is not persuasive for the reasons set forth above, namely that the effective filing date of the instant application that Applicant is entitled to is March 9, 1994. With regard to Applicant's argument that the combination of Chen '708 and Becnel, even if proper, fail to yield the apparatus of the present claims, this argument is not persuasive because the combination of Chen '708 and Becnel teaches all of the claimed subject matter as set forth later below.

Applicant has argued concerning the rejection of claims 26, 31-32, and 33 under 35 USC 103(a) based upon the combination of Japanese Patent 2-72,299 and Becnel '941 and Parker 5,370,160 that Parker '160 is not a proper prior art reference in view of the claim for priority to earlier patent application 07/781,322. This argument is not persuasive for the reasons set forth above, namely that the effective filing date of the instant application that Applicant is entitled to

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is March 9, 1994. With regard to Applicant's argument that the combination of Japanese Patent 2-72,299, Becnel '941, and Parker '160, even if proper, fail to yield the apparatus of the present claims, this argument is not persuasive because the combination of Japanese Patent 2-72,299, Becnel '941, and Parker '160 teaches all of the claimed subject matter as set forth later below.

### ***Terminal Disclaimer***

The terminal disclaimer filed on May 5, 2003 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent 5,318,080 has been reviewed and is accepted. The terminal disclaimer has been recorded.

### ***Effective Filing Date of the Instant Application***

The effective filing date for all pending claims of the instant application is March 9, 1994, based on U.S. Patent application 08/209,061, which matured into U.S. Patent 5,472,064. Claim 2 recites a first fluid line selectively intercoupled to the fluid exchange system and one of the pair of transmission cooling circuit ports and a second fluid line selectively intercoupled to the fluid exchange system, the source, and the other one of the pair of transmission cooling circuit ports, with the bypass fluid line selectively intercoupled between the pair of transmission cooling circuit ports. Claim 3 recites a bypass conduit that provides selective fluid communication between the first and second conduits, and selectively stopping the flow in the bypass conduit. Claim 4 recites similar features as set forth above with regard to claim 2, including a bypass conduit selectively communicating fluid between the pair of transmission cooling circuit ports, selectively coupling the bypass conduit between the pair of transmission

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cooling circuit ports, and selectively uncoupling the bypass conduit and coupling the first and second conduits. Claim 24 recites a bypass conduit for selectively communicating fluid between the pair of transmission cooling circuit ports, and selectively coupling the bypass conduit between the pair of transmission cooling circuit ports, and selectively uncoupling the bypass conduit. Claim 25 recites a bypass conduit for selectively communicating fluid between the first conduit to the second conduit, establishing a bypass condition by selectively coupling the bypass conduit between the first and second conduits, and establishing a fluid exchange condition by selectively uncoupling the bypass conduit between the first and second conduits. All of these features are found in U.S. Patent application 08/209,061, which matured into U.S. Patent 5,472,064. These features are not found in earlier U.S. Patent application 07/781,322 which matured into U.S. Patent 5,318,080, because earlier U.S. Patent application 07/781,322 which matured into U.S. Patent 5,318,080 does not contain a selectively coupled first and second line, a selectively coupled bypass line, and does not have a recirculation mode. Although figure 5 of U.S. Patent application 07/781,322 which matured into U.S. Patent 5,318,080 shows a T 55 that is coupled to the outlet port on the radiator 20 and the inlet port 16 on the transmission, T 55 is not selectively coupled to the first and second fluid lines 52 and 47, because these lines are disconnected from the fluid circuit and the T 55 is connected to determine the direction of flow in the fluid circuit, then the T 55 is disconnected and the first and second fluid lines 52 and 47 are reconnected to the fluid circuit.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 3-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen 5,337,708.

Note in figures 1-2 and 4 the fluid exchange system 10 for performing a fluid exchange procedure on automatic transmission 14 of a vehicle having a pair of transmission cooling circuit ports 28, 34, comprising first conduit 26/24 communicating fluid from the transmission and selectively intercoupled to the fluid exchange system and one transmission port 28, second conduit 18 communicating fluid to the transmission and selectively intercoupled to the fluid exchange system and the other one 34 of the transmission cooling circuit port, bypass conduit/line 82 selectively communicating fluid between the pair of transmission cooling circuit ports 28, 34, with a bypass mode being established by selectively coupling the bypass conduit between the pair of transmission cooling circuit ports so that used fluid from the fluid circuit is passed through the bypass conduit 82 (see figure 2), with the used fluid being passed substantially unrestricted through the bypass conduit 82 so that pressure within the bypass conduit is essentially equivalent to pressure at the pair of transmission cooling circuit ports, with an exchange mode of operation (see figure 4) being established by selectively uncoupling the bypass conduit 82 and coupling the first and second conduits so that used fluid from the fluid



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circuit is received into the first conduit 26/24 and fresh fluid is received into the second conduit 18 and introduced into the accessed fluid circuit. Note fresh fluid receptacle 68 and used fluid receptacle 72, at least one of which is removable from the exchange system for refilling or emptying purposes. Chen also discloses the method of exchanging used fluid with fresh fluid in the automatic transmission, with the used fluid initially being contained within the transmission, and with a substantial portion of the used fluid being subsequently discharged into receptacle 72, with the fresh fluid initially being contained in source container 68, comprising identifying the transmission cooling circuit, uncoupling a portion of the transmission cooling circuit to provide access to first transmission cooling port 28 and second transmission cooling port 34, with first port 28 directing used transmission fluid outwardly from the automatic transmission under pressure from the automatic transmission, providing the fluid exchange system 10 with first conduit 26/24, second conduit 18, and bypass conduit 82 selectively communicating fluid between the first conduit and the second conduit, coupling the bypass conduit 82 to the first and second transmission cooling circuit ports 28, 34, respectively, energizing the transmission to flow used fluid through the bypass conduit 82, with the flow being substantially unrestricted by the bypass conduit so that pressure within the bypass conduit is essentially equivalent to pressure within the transmission cooling circuit, selectively stopping the flow in the bypass conduit 82 via valves 80A and 80B, and providing the first conduit 26/24 and the second conduit 18 in fluid communication with the first and second transmission cooling circuit ports, thus flowing used fluid into the first conduit 26/24 and flowing fresh fluid into the second conduit 18 during an exchange procedure.

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***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 24, 26, and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen 5,337,708 in view of Becnel 3,513,941. Chen discloses a fluid exchange system and a method of exchanging used fluid with a fresh fluid in a vehicle having an automatic transmission connected to a fluid cooling circuit substantially as claimed as set forth above, with reference to figures 1-4, including measuring the fluid parameter of pressure and flow rates in first conduit 26/24 and second conduit 18 (see column 8, lines 60-68 and column 9, lines 10-18) during the exchange condition via pressure gauges such as 90 and fluid flow meters such as 86. However, Chen does not disclose that the transmission has an internal fluid pump to conduct circulated fluid in the fluid cooling circuit.

Becnel (figure 1 and column 1, lines 64-72 and column 2, lines 1-16) shows a fluid change apparatus for an automatic transmission 10, which is provided with at least two internal pumping units, each of which discharges into a line 12 leading to a cooler 14 mounted in or adjacent radiator 16, with a return line 18 connecting the cooler back to the transmission pan or sump, for the purpose of circulating automatic transmission fluid in the transmission.

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It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide the fluid exchange system and method of exchanging used fluid with a fresh fluid of Chen with an internal fluid pump located in the automatic transmission, as taught by Becnel, for the purpose of circulating automatic transmission fluid in the transmission.

Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen 5,337,708 and Becnel 3,513,941 as applied to claim 32 above. The modified method of exchanging used fluid with a fresh fluid of Chen shows all of the claimed subject matter including measuring the fluid parameter of flow rates in first conduit 26/24 and second conduit 18 (see column 8, lines 60-68 and column 9, lines 10-18) during the exchange condition via fluid flow meters such as 86. However, Chen as modified does not show that the fluid flow meters are electronic.

Official Notice is taken that it is known to those of ordinary skill in the art that modern electronically indicating fluid flow meter gauges are used in instances where it is desired to obtain a more accurate measure of the flow rate via an electronic readout.

It would have been further obvious at the time the invention as made to a person having ordinary skill in the art to replace the flow meters of the modified fluid exchange apparatus and method of Chen with modern electronically indicating fluid flow meter gauges, for the purpose of obtaining a more accurate measure of the flow rate via an electronic readout.

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Claims 26 and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 2-72,299 and Becnel 3,513,941 and Parker 5,370,160. Japanese Patent 2-72,299 discloses a method of exchanging used fluid with a fresh fluid in a vehicle having an automatic transmission connected to a fluid cooling circuit, with a fluid exchange system 1 for performing a fluid exchange procedure on automatic transmission A of a vehicle comprising first conduit 2 communicating fluid from the transmission, second conduit 3 communicating fluid to the transmission, bypass conduit 11 (having pressure responsive valve 12 which provides selective communication at high pressure conditions, see page 16, paragraph 4 of Applicant's English translation thereof) selectively communicating fluid between the first conduit and the second conduit where the first conduit and the second conduit are coupled into an accessed fluid circuit C-D of the vehicle, with a bypass mode being established by selectively coupling the bypass conduit between the first and second conduits so that used fluid from the fluid circuit is received into the first conduit, passed through the bypass conduit, and into the second fluid conduit so that used fluid is reintroduced into the accessed fluid circuit, with an exchange mode of operation being established by selectively uncoupling the bypass conduit between the first and second conduits so that used fluid from the fluid circuit is received into the first conduit and fresh fluid is received into the second conduit and introduced into the accessed fluid circuit. Note fresh fluid receptacle 10 and used fluid receptacle 7, at least one of which is removable from the exchange system for refilling or emptying purposes. The Japanese Patent also discloses the method of exchanging used fluid with fresh fluid in the automatic transmission, with the used fluid initially being contained within the transmission, and with a substantial portion of the used fluid being subsequently discharged into receptacle 7, with the fresh fluid initially being

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contained in source container 10, comprising identifying transmission cooling circuit C-D, uncoupling a portion of the transmission cooling circuit to provide access to first port D1 and second port D4, with first port D1 directing used transmission fluid outwardly from the automatic transmission under pressure from the automatic transmission, providing the fluid exchange system 1 with first conduit 2, second conduit 3, and bypass conduit 11 selectively communicating fluid between the first conduit and the second conduit, coupling first conduit 2 to the first port D1, coupling second conduit 3 to the second port D4 via radiator C and line D3, energizing the transmission to flow used fluid through first conduit 2, bypass line 11, and second conduit 3, and selectively blocking fluid communication between the first conduit 2 and the second conduit 3 via bypass conduit 11 and valve 12 thus flowing used fluid into the first conduit 2 and flowing fresh fluid into the second conduit 3 during an exchange procedure.

However, Japanese Patent 2-72,299 does not disclose that the transmission has an internal fluid pump to conduct circulated fluid in the fluid cooling circuit, and does not disclose measuring a fluid parameter in the first and second conduits during the exchange condition, via a pressure indicator, or via a fluid flow meter.

Becnel (figure 1 and column 1, lines 64-72 and column 2, lines 1-16) shows a fluid change apparatus for an automatic transmission 10, which is provided with at least two internal pumping units, each of which discharges into a line 12 leading to a cooler 14 mounted in or adjacent radiator 16, with a return line 18 connecting the cooler back to the transmission pan or sump, for the purpose of circulating automatic transmission fluid in the transmission.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide the fluid exchange system and method of exchanging used fluid with a fresh fluid of the Japanese Patent 2-72,299 with an internal fluid pump located in the automatic transmission, as taught by Becnel, for the purpose of circulating automatic transmission fluid in the transmission.

Parker (figure 3) shows a method of exchanging used fluid with a fresh fluid in a vehicle having an automatic transmission connected to a fluid cooling circuit whereby pressure is measured in a first supply conduit 15 via pressure gauge 43 and flow rate is measured via flow meter 41 in the first conduit, and pressure is measured in a second removal conduit 13 via pressure gauge 25 and flow rate is measured via flow meter 31 in the second conduit, for the purpose of indicating the pressure and flow rate of fresh fluid flowing into the transmission and used fluid flowing out of the transmission during an exchange procedure.

It would have been further obvious at the time the invention was made to a person having ordinary skill in the art to provide the modified fluid exchange method of Japanese Patent 2-72,299 with pressure gauges and flow rate meters in the first and second conduits, as taught by Parker, for the purpose of indicating the pressure and flow rate of fresh fluid flowing into the transmission and used fluid flowing out of the transmission during an exchange procedure.

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Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 2-72,299 and Becnel 3,513,941 and Parker 5,370,160 as applied to claim 32 above. The modified method of exchanging used fluid with a fresh fluid of Japanese Patent 2-72,299 shows all of the claimed subject matter except for the fluid flow meters being electronic. Rather, the flow meters are sight gauges, which are visual.

Official Notice is taken that it is known to those of ordinary skill in the art that visual sight gauges (which are a mechanical type gauge) are replaceable via modern electronically indicating fluid flow meter gauges, for the purpose of obtaining a more accurate measure of the flow rate via an electronic readout.

It would have been further obvious at the time the invention was made to a person having ordinary skill in the art to replace the mechanical sight gauges of the modified fluid exchange apparatus and method of Japanese Patent 2-72,299 with modern electronically indicating fluid flow meter gauges, for the purpose of obtaining a more accurate measure of the flow rate via an electronic readout.

***Allowable Subject Matter***

Claims 25, 28-30, and 34-41 are allowed.

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Claim 27 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Verdier whose telephone number is (703)-308-2638. The examiner can normally be reached on Monday-Friday from 10:00-6:30.

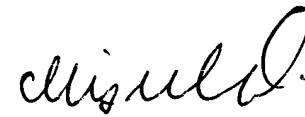
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward K. Look can be reached on (703) 308-1044. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.



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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.

C.V.  
June 15, 2003



Christopher Verdier  
Primary Examiner  
Art Unit 3745